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ABSTRACT

Development of alternative doctoral programs to meet a broadened range of social and educational needs is discussed. The Doctor of Arts degree is seen as only one alternative to the status quo. Regardless of the decision on that degree at a university, the basic issues remain, as do other alternative solutions, including reform of the Ph.D. It remains the responsibility of the various academic units to answer questions of need, appropriateness, and quality of any degree program, questions which cannot be resolved without considerable investigations and discussion within the context of that unit's offerings. (Author/LBH)

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Doctoring the doctorate: broadened programs to meet broader needs

Graduate education in the United States has been the subject of much discussion and little change ever since Yale inaugurated the program which awarded the first American Ph.D. in 1861. Despite continuing criticism and a rapidly developing social environment, the system has remained essentially as it was established, borrowed almost intact from the nineteenth-century German model. In recent years, however, a number of conditions seem to have generated a process of change which may well be leading to some far-reaching reforms. With the Ph.D. degree at the center of American liberal arts graduate education, the most visible signs of such change today are (a) efforts aimed at broadening the Ph.D. program and (b) experiments with new special-purpose degree programs, such as the Doctor of Arts for college teachers. This issue of *Comment* reviews much of the current thinking and developments in Ph.D. and alternative degree programs.

Forces for change

A number of influences have converged to create a climate of change in graduate education. Among them are a tightened financial situation, changing patterns of career opportunities for graduates, and a growing demand for attention to the preparation of college teachers *per se*.

Financial support. The economic squeeze resulting from a rise in the cost of education coupled with cutbacks in support by both government and private sources has forced the nation to take a hard look at the effectiveness of both existing and proposed graduate programs.

Supply and demand. Historically, a major problem in graduate education has been keeping up with the demand for college and university teachers, in chronic short supply because of an accelerating birth rate and increasing college attendance. Since the late 1960's, however, many who expected to find university teaching positions have had to look elsewhere for employment. At the same time, growing attendance at two- and four-year colleges is increasing the demand for more broadly prepared teachers for those institutions. Among non-teaching professional fields, developments within the field as well as shifting supply and demand patterns frequently close off opportunities in specialized areas.

Despite the caution of some that the Ph.D. should not become a vehicle for vocational training, many urge that in the face of a changing job market the program's traditional one-track approach should be broadened to allow the graduate more career flexibility.

Teacher preparation. Even as concern over *quantity* has diminished, the *quality* of the preparation of teachers has become a primary consideration. Student criticism of undergraduate instruction expressed during the campus unrest of the 1960's added a measure of urgency to the question, and the supply of properly-prepared college

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teachers is probably the most discussed issue in graduate education today.

Criticism of the Ph.D.

When the relative merits of graduate education and its cornerstone, the Ph.D., come under discussion, a number of recurring themes are heard. Jacques Barzun (1968: 92-93), an outspoken critic of the Ph.D., raises several of them:

> Even in the leading universities, which have somewhat rationalized and humanized the system, the obtention of the doctorate is still an ordeal. It is costly and time-consuming. The demands are still artificial: a contribution to knowledge of book length, and written to satisfy from three to five unknown judges; written and rewritten, "researched" abroad (except in American subjects or in science); buttressed by competence in two foreign tongues (what about English for one?); produced while adjusting to married life and baby-nursing on little or no money; and all this to get a teaching job without ever being taught how a faculty member should think and behave.

These and related questions have sparked most of the movement toward reform in graduate education today, and merit closer consideration.

Research vs. teaching. The Ph.D. degree originated as certification for the highly specialized research scholar, and it continues to emphasize that kind of training for its recipients. A few would argue that even for the research specialist the degree requirements are unnecessarily rigid, taxing, and confining. But not all who pursue the Ph.D. intend careers in research; many seek the degree as preparation for college teaching, for which it is virtually required, and most will produce little or no research after receiving the degree. The question: how well does the degree serve the recipient who does not plan a life of research, particularly the teacher?

Many maintain that the degree as it stands, with its heavy emphasis on research, is the best possible preparation for teaching. Bernard Berelson (1960), for example, defends the degree by arguing that the number of teachers who continue to do research is larger than is generally supposed, and, further, that it is intense specialization rather than knowledge of instructional methodology which determines a teacher's effectiveness. Berelson and others (notably Christopher Jencks and David Riesman [1968]) argue that the teacher needs fully as much research training as any other scholar, and that any preparation in instructional techniques should come in addition to, not instead of, research training.

On the other hand are those who contend that the Ph.D.'s emphasis on a narrow subspecialty produces a scholar who is ill-equipped in both subject and temperament for teaching, particularly in undergraduate courses where a more generalized orientation is needed.

All too often, these critics say, the newly-minted Ph.D. arrives for a first assignment with no knowledge of instructional techniques, little insight into the backgrounds and motivations of students, and not one day of classroom teaching experience. A growing chorus is demanding that relevant course work and actual experience be included as part of graduate programs for those preparing for careers in college teaching.

The dissertation. Students and educators alike have long been critical of the all-but-impossible obstacles faced by the doctoral aspirant in producing an ostensibly original contribution to knowledge. The increasingly difficult problem of finding an original topic in some fields sends people scurrying down academic back alleys, and for many, what cannot be provided in originality is substituted for in length.

Time span. The Ph.D. takes too much time to obtain, say many, making it costly in terms of money and effort for both the student and the institution, and in fact putting the degree out of reach for the student who simply cannot endure

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To interfere with the free development of talent, to obstruct the natural play of supply and demand in the teaching profession, to foster academic snobbery by the prestige of certain privileged institutions, to transfer accredited value from essential manhood to an outward badge, to blight hopes and promote invidious sentiments, to divert the attention of aspiring youth from direct dealings with truth to the passing of examinations—such consequences, if they exist, ought surely to be regarded as drawbacks to the system, and an enlightened public consciousness ought to be keenly alive to the importance of reducing their amount. Candidates themselves do seem to be keenly conscious of some of these evils, but outside of their ranks or in the general public no such consciousness, so far as I can see, exists; or if it does exist, it fails to express itself aloud.

—William James (1917: 336-7)

> **Most dissertations, especially in the humanities, are a sheer waste of everyone's time, when not ludicrous in their very conception . . . . What is "scholarship?" It is a learned monograph, complete with footnotes. It is a proposed solution to a pressing problem. It is the discovery that *x* really is a problem. It is a "popular" book, synthesizing for the intelligent general reader knowledge that has already become known to the specialist. It is all of these.**
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> *—Herbert Packer (1970: 51)*

long years of effort. The National Research Council's Report on Doctoral Programs (1968) indicates that the median time-span for enrollment is 5.4 years, while the median total time spent earning the degree is 8.2 years. These figures vary widely among fields, with most natural science Ph.D.'s taking one or two years less in total time and those in the humanities averaging up to five years longer. Most studies have identified the chief factors in delay as finances, difficulty in completing the dissertation, and military service. In addition, however, many charge that the fault rests largely with institutions, which have failed to provide clearly defined expectations and well structured programs enabling completion of the degree in a shorter time span.

Dropouts and A.B.D.'s. That many who set out to obtain the Ph.D. fail to do so is known; precisely how many and why has proven difficult to ascertain. Studies indicate that somewhere between one-third and two-thirds of doctoral aspirants may be expected to earn the degree within eight to ten years. A few will earn it after that; others will give up at some point along the way. For many, that point will be when they have completed all but the dissertation — earning for themselves the informal, mildly negative appelation "A.B.D." Critics have argued that intermediate degrees should be established to give affirmative recognition for work done, and that master's and intermediate degrees should be required en route to the doctorate in order to prevent the lesser degrees being used simply as consolation prizes, as they sometimes are, for those who fail to complete doctoral requirements.

With this summary of the major criticisms of the traditional Ph.D. program, we turn to a discussion of measures proposed as improvements, including both reform of the Ph.D. and establishment of alternative degree programs.

Reforming the Ph.D.

Would-be reformers of the Ph.D. include both those who would broaden the program to accommodate the demands of a changing career marketplace and those who would maintain it as a research degree with some modifications from the present format.

Broader approach. Those who advocate liberalizing the Ph.D. to make it more appropriate for the non-research career, rather than establishing special-purpose degrees, do so principally on the grounds that new doctoral degrees would have difficulty earning the acceptance and recognition now accorded the Ph.D. In addition, many, such as the Carnegie Commission, feel that a single doctoral degree encompassing several optional tracks is to be preferred over a proliferation of degrees (although, believing that graduate school faculties in many cases will resist changing the Ph.D., it looks to the Doctor of Arts as a pragmatic and worthy approach to improving the preparation of college teachers, and has financially backed development of the D.A.). In a report written for the commission, Stephen Spurr (1970: 137) defends the viability of an expanded Ph.D.:

> The American Ph.D. program is broad enough to build into it the necessary elements to make it suitable for the preparation of teachers and professionals as well as of research scholars . . . . The only question is whether the faculties of the individual departments will face up to the multivariate careers of the products of their doctoral programs and build in the necessary flexibility.

The flexibility of which Spurr speaks might be achieved through a number of alterations in Ph.D. requirements, many of them already appearing on the scene, including (a) programs allowing a significant amount of course work in fields related to the major course of study; (b) interdisciplinary studies (already a developing trend); (c) broad coverage of a discipline rather than narrow specialization; (d) minors in education and behavioral science fields, and (e) a wider range of projects honored as fulfilling the dissertation requirement.

Internships. Supervised internships in college teaching should be required of all Ph.D. candidates, say some; of all Ph.D. candidates planning to teach, say others. Those who would make teaching experience universally mandatory present the same rationale used by those who defend stringent research requirements for all: the experience is beneficial for

the student and contributes to mastery of the subject. Reflecting popular criticism of present-day practices, Spurr cautions that such experience "should be designed to benefit the doctoral student and not serve as a means of providing cheap instruction for the undergraduate."

Dissertation(s). Many departments are beginning to look upon the dissertation as a research project rather than as development of original knowledge, allowing greater breadth in topic and treatment, and placing greater value on conciseness and brevity. Many educators go further to suggest that a variety of research experiences and thesis presentations might be of more educational value to the student than one massive project reported in a single manuscript, and that the dissertation requirement might also be satisfied by research on problems of curriculum development or of teaching.

Four-year program. The entire doctoral program, many say, would be strengthened both academically and economically if designed and administered in such a way that it could be completed within four years. To achieve this would require a more structured program, involving not uniform requirements but better organized and more clearly defined departmental expectations, more faculty guidance and counseling, and financial support during work on the dissertation. Princeton University, something of a pioneer in its efforts to achieve a school-wide four-year model, has reduced both dragout time and dropout rate considerably.

Language requirement. Knowledge of a foreign language, valued both as a research tool and as a badge of learning, survived as a requirement when the traditional German doctoral program was imported to America. In recent years, however, the foreign language requirement is giving way to other research tools, such as statistics and practical knowledge of computer usage, or being dropped.

The main question is *how* to produce well-qualified teaching scholars, not necessarily to defend old degrees or to construct new ones.

—Council of Graduate Schools in the United States (1971: 6)

The Doctor of Arts

Among doctoral programs proposed as alternatives to the Ph.D., the one currently capturing the most attention is the Doctor of Arts, a degree designed specifically to provide doctoral-level preparation for those intending a career of college teaching.

Proposals for such a degree, which began cropping up with regularity during the mid-1960's, at first envisioned the degree largely as a Ph.D. without dissertation. Today, however, the term Doctor of Arts is used most often to denote a degree equally as demanding as the Ph.D. although different in content and emphasis. As thus conceived, the D.A. would carry the same admission, retention, and degree standards as the Ph.D.; require the same amount of time (usually specified as four years); and, it is hoped, earn the same treatment in hiring, salary, and promotion as the Ph.D.

Characteristics. A number of special features characterize most proposals for the degree and differentiate it from the traditional Ph.D.

One, the D.A. is specifically designed to prepare undergraduate teachers, and admission requirements include the applicant's potential, interest, and aptitude for college teaching.

Two, course work centers on the subject to be taught as well as supporting work in related fields; it is generally broader within a discipline and may span several disciplines.

Three, a portion of the course work deals with the education process, including instructional techniques, psychology of learning, history of and contemporary issues in higher education, and the role of the faculty member within the educational setting.

Four, the research component focuses upon the use and interpretation of research and its application to teaching, rather than the discovery of new knowledge. It may take the form of a dissertation, a series of scholarly papers worthy of publication, or a creative project such as development or synthesis of teaching materials or curricula.

Five, the foreign language requirement may be dropped in favor of some other research tool.

Six, a teaching internship at a public or private two- or four-year institution or the degree-granting institution, usually for one year, includes varied and progressively challenging classroom experience under the supervision of experienced faculty members.

Seven, the comprehensive examination is broader, but no less demanding, than that for the Ph.D.

From this description it may be noted that there is a strong parallel between the Doctor of Arts and proposals for a generalized Ph.D.

Current status. Enthusiasm for the Doctor of Arts degree has developed rapidly since it made its first appearance at Carnegie-Mellon University in 1967 in the fields of mathematics, history, English, and fine arts. By November, 1971, according to a survey by Robert H. Koenker (1971: 1-2), 16 institutions already were offering the D.A. in one or more fields,[1] 11 were definitely planning to offer it, and another 65 were giving the degree serious consideration.

Development of the degree received a financial boost from the Carnegie Corporation of New York, which in 1970 granted planning funds totaling $935,000 to ten institutions.[2] Eight of the recipients were among the 16 institutions offering the degree at the time of the Koenker report.

Support in principle for the degree has been voiced by graduate deans through the Council of Graduate Schools in the United States and by the American Association of State Colleges and Universities, each of which issued guidelines for institutions developing D.A. programs. In 1971 the groups issued a joint statement on the degree, the principles of which are reflected in the description of the degree used here.

A number of other groups have endorsed, approved, or accepted the degree, including the National Science Foundation, American Association of Junior Colleges, Modern Language Association, National Academy of Arts and Sciences, Bureau of Higher Education of the USOE, National Endowment for the Humanities, and the North Central Association of Colleges and Secondary Schools.

The question of establishing such a degree at the University of Minnesota was studied by the Committee on Doctoral Programs of the Graduate School, which in September, 1972, recommended that the University adopt enabling legislation to permit the Doctor of Arts degree to be awarded by those departments and other academic units judged to be capable of establishing a degree program consistent with the goals and standards set forth by the Council of Graduate Schools. The committee, chaired by Thomas Clayton, Professor of English, also recommended that any department or academic unit wishing to offer the degree be required to prepare a detailed statement demonstrating that such a degree will meet a clearly present academic and professional need; that the program will embody a coherent and carefully supervised course of study, applied work, and appropriate research; and that the degree program will rigorously maintain high standards. The committee's recommendations are currently before the policy and review committees of the Graduate School.

Prospects. The future of the D.A. seems to depend largely on whether it can establish itself in fact and reputation as a worthy counterpart to the Ph.D. A caution issued repeatedly is that institutions establishing a D.A. program must not look upon it as a second-class degree and must work to ensure the highest standards, primarily through strong institutional commitment, involvement of highly capable faculty and administrators devoted to the preparation of college teachers, and enrollment of top students.

In much the same way that the D.A. is designed for those going into college teaching, a greater use should be made of professional doctorates for clinical practice in psychology, social work, and other fields in which the emphasis is less on research and more on practice.

—Carnegie Commission (1970: 16-17)

Skeptics have suggested that first-rate students will tend to steer clear of the D.A., if only for fear that the degree's lack of established prestige will cost them later in career opportunities and remuneration. Ongoing programs such as that at Carnegie-Mellon, however, report no trouble in finding top candidates and say they now have a waiting list of

[1] Offering the D.A. as of November, 1971, were: Ball State University, Brown University, Carnegie-Mellon University, Claremont Graduate School, Idaho State University, Lehigh University, Middle Tennessee State University, Ohio State University, State University of New York at Albany, University of Michigan, University of Mississippi, University of North Dakota, University of Northern Colorado, University of Oregon (not a typical D.A. degree), University of the Pacific, and University of Washington.

The degree was offered most often in English (9) and history (6), followed by mathematics, government, economics (3), chemistry, physics, biology, botany, music (2), and 15 other fields, many of them foreign languages.

[2] Carnegie Corporation planning grant recipients were: Ball State University, Brown University, Claremont University Center, Dartmouth College (which recently announced it was dropping its plans and returning the bulk of the grant due to "the national climate of low priority for new doctoral programs"), Idaho State University, Massachusetts Institute of Technology, University of Michigan, State University of New York at Albany, University of Washington, and Washington State University.

highly qualified applicants. An apparent surge of interest in undergraduate teaching, awareness of a growing job market in two- and four-year institutions, and general dissatisfaction with the Ph.D. would seem to augur well for a ready supply of good students wherever a D.A. program is established.

It is also anticipated that D.A.'s will be hired by universities, either for undergraduate instruction or to produce other D.A.'s. In this regard, a commitment by D.A.-granting institutions to add D.A. recipients to their faculties, while perhaps not significant numerically, is necessary as a statement of faith in the degree and should encourage its acceptance as a teaching credential by other institutions.

Concern also has been voiced over the number and kinds of institutions which might offer the D.A. The Council of Graduate Schools, apparently fearing an undesirable proliferation of doctoral degree-granting institutions, has cautioned that the degree should be authorized only in fields "with appropriate academic strength in the universities" (1971: 7-8) and only in the strongest institutions, questioning whether it should be offered by institutions which do not offer other doctoral programs. "The Doctor of Arts must not be viewed as a less expensive version of the Ph.D., or as a means by which 'emerging institutions can inexpensively offer doctoral study,'" cautions the council.

The Carnegie Commission, however, suggests that some institutions which do not enjoy prominence among research universities might have both the interest and the capacity to introduce the Doctor of Arts degree. The less specialized nature of the degree can reduce the need for highly developed support facilities, such as large specialized research libraries and extensive computer and laboratory equipment, making the program economically feasible where the Ph.D. may not be. Nevertheless, the commission does stipulate that the degree should be limited to "academic departments of high quality and of adequate size for economical operations."

College and university teaching is . . . the only profession (except the proverbially oldest in the world) for which no training is given or required.

—Jacques Barzun (1968: 36)

Resistance to a new degree by graduate institutions themselves has been mentioned as another possible obstacle. However, in the final analysis, it seems that the demand for a broadened course of doctoral study leading to a career of college teaching makes some kind of movement inevitable, whether to a liberalized Ph.D. or the Doctor of Arts. Since the two are in effect quite similar, the choice may prove to be simply a political one for the institutions involved, depending upon which option receives the most support (or least resistance) from all concerned.

Other doctoral programs

The Doctor of Arts made its appearance on the graduate education scene against a backdrop of significant activity in other degree programs. Most notable among doctoral programs are the emergence of professional degrees in education, business administration, social work, and other fields, attempts to establish teaching degrees in the various disciplines, and degrees established to recognize creative achievement, such as Doctor of Musical Arts.[3]

Intermediate degrees

A number of intermediate degree programs are emerging as alternatives to doctoral study, particularly for teachers. Such programs fall into two major categories: those which mark the completion of a program encompassing all work required for a doctorate short of the dissertation, and those designed to extend the scope of the master's degree by adding a measure of professional training.

Candidate in Philosophy. The Candidate in Philosophy certifies completion of doctoral requirements up to the dissertation (an accomplishment which often goes unrecognized for those who do not complete the dissertation and receive no degree) and also carries with it the sense of admitting one to "candidacy" for the doctoral degree. The most widely used designation for such a program, the term Candidate in Philosophy first came into use in 1966 at the University of Michigan.[4]

[3]The discussion of degree programs in this and the following sections is based largely on Spurr (1970).

[4]The designation also was adopted by the University of California at Berkeley in 1966. The university's Select Committee on Education had recommended adoption of the Doctor of Arts degree as proposed by Fredson Bowers, Professor of English at the University of Virginia, the first to call for use of the title for an all-but-dissertation type of program. The university approved the program but felt it could not properly be termed a doctorate; it appears that since that time other institutions have followed the same thinking in naming their programs.

Expanded master's programs. Several institutions now offer two year upgraded master's programs to prepare undergraduate teachers. An example is the Master of Philosophy introduced at the University of Toronto in 1964, which offers two years of generalized liberal arts courses and seminars to students who must meet admission standards even higher than those for the Ph.D. A similar program is the Master of Arts in College Teaching offered at the University of Tennessee, which includes education-related as well as subject-matter courses.

Conclusion

Development of alternative doctoral programs to meet a broadened range of social and educational needs is a phenomenon not remote from our own institution, as evidenced by the report of the Graduate School Committee on Doctoral Programs recommending enablement of the Doctor of Arts degree. While the committee's report is currently a matter for consideration by the committees of the Graduate School, its implications are of considerable import to the various departments and academic units of the University.

At the same time, the Doctor of Arts degree is only one alternative to the *status quo*. Regardless of the decision on that degree at the University, the basic issues remain, as do other alternative solutions, including reform of the Ph.D. It remains the responsibility of the various academic units to answer questions of need, appropriateness, and quality of any degree program, questions which cannot be resolved without considerable investigation and discussion within the context of that unit's offerings. In the light of the committee's report, and in the larger framework of current controversy over the existing Ph.D. and its alternatives, this issue of *Comment* has been presented with the hope of contributing a readily available digest of information and background to such discussion at the University of Minnesota.

Recommended Bibliography

The Doctor of Arts Degree. Washington, D.C.: The Council of Graduate Schools in the United States, March, 1970.

Dressel, Paul L., and Frances H. Delisle. *Blueprint for Change: Doctoral Programs for College Teachers.* Iowa City: American College Testing Program, 1972.

Eble, Kenneth. *Professors as Teachers.* San Francisco: Jossey-Bass, 1972.

Less Time, More Options: A special report and recommendations by the Carnegie Commission on Higher Education. Hightstown, N.J.: McGraw-Hill, 1970.

Mayhew, Lewis. *Reform in Graduate Education.* SREB Research Monograph, No. 18. Atlanta: Southern Regional Education Board, 1972.

Spurr, Stephen. *Academic Degree Structures: Innovative Approaches.* New York: McGraw-Hill, 1970.

References

Barzun, Jacques. *The American University.* New York: Harper & Row, 1968.

Berelson, Bernard. *Graduate Education in the United States.* New York: McGraw-Hill, 1960.

James, William. "The Ph.D. Octopus," in *Memories and Studies.* London: Longmans, Green, & Co., 1917.

Jencks, Christopher, and David Riesman. *The Academic Revolution.* Garden City, N.Y.: Doubleday & Co., 1968.

Koenker, Robert. *Status of the Doctor of Arts Degree Programs for Preparing Junior College and College Teachers.* Muncie, Ind.: mimeographed, 1971.

Less Time, More Options: A special report and recommendations by the Carnegie Commission on Higher Education. Hightstown, N.J.: McGraw-Hill, 1970.

Packer, Herbert. "Piling Higher and Deeper: The Shame of the Ph.D.," in *Change.* November-December 1970, pp. 49-53.

Spurr, Stephen. *Academic Degree Structures.* New York: McGraw-Hill, 1970.

Supplemental Statement on the Doctor of Arts Degree 1972. Washington, D.C.: The Council of Graduate Schools in the United States, 1971.